

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

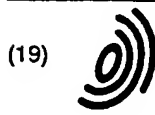
Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) EP 0 832 032 B1

(12) EUROPEAN PATENT SPECIFICATION

(45) Date of publication and mention
of the grant of the patent:
14.04.1999 Bulletin 1999/15

(21) Application number: 96922990.5

(22) Date of filing: 08.07.1996

(51) Int. Cl.⁶: B63B 35/28

(86) International application number:
PCT/GB96/01634

(87) International publication number:
WO 97/02980 (30.01.1997 Gazette 1997/06)

(54) FLEXIBLE VESSELS FOR TRANSPORTING FLUENT CARGOES

DEHNBARE BEHÄLTER ZUM TRANSPORT VON FLÜSSIGEN LADUNGEN

CONTENEURS SOUPLES SERVANT A TRANSPORTER DES CHARGEMENTS DE MATIERES
COULANTES

(84) Designated Contracting States:
AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC
NL PT SE

(30) Priority: 07.07.1995 GB 9513911

(43) Date of publication of application:
01.04.1998 Bulletin 1998/14

(73) Proprietor:
Aquarius Holdings Limited
St. Peters Port, Guernsey (GB)

(72) Inventors:
• SAVAGE, Nicholas, Macewan
Stanner's Hill Farm Chobham GU24 8HN (GB)

• SAVAGE, Christopher, David, Wyndham
Mile Path Woking Surrey GU22 0JL (GB)

(74) Representative:
Ablett, Graham Keith et al
Ablett & Stebbing,
Caparo House,
101-103 Baker Street
London W1M 1FD (GB)

(56) References cited:
FR-A- 2 210 180 FR-A- 2 377 931
GB-A- 2 181 996 US-A- 2 682 751
US-A- 3 289 721 US-A- 3 983 830

Note: Within nine months from the publication of the mention of the grant of the European patent, any person may give notice to the European Patent Office of opposition to the European patent granted. Notice of opposition shall be filed in a written reasoned statement. It shall not be deemed to have been filed until the opposition fee has been paid. (Art. 99(1) European Patent Convention).

EP 0 832 032 B1

CLAIMS:

1. Apparatus for transporting fluent cargo through
5 liquid comprising one or more units arranged substantially in
linear alignment, wherein at least one said unit comprises two
or more flexible containers close coupled side by side.
2. Apparatus according to claim 1, wherein in use,
10 adjacent facing sides of respective containers of said at
least one unit are substantially parallel along at least part
of their length.
3. Apparatus according to claim 1 or 2, wherein no two
15 consecutive linearly aligned units comprise a single flexible
container.
4. Apparatus according to any preceding claim, wherein
each container has angled, front and rear end sections.
20
5. Apparatus according to any preceding claim, wherein
each container is parallel sided.
6. Apparatus according to any preceding claim, wherein
25 the container is diamond-shaped or hexagonal.
7. Apparatus according to any preceding claim, wherein
the containers are connected at their broadest extent.
- 30 8. Apparatus according to any preceding claim, wherein
the apparatus comprises alternating sequential units of one
and two containers.
9. Apparatus according to any preceding claim, wherein
35 the apparatus comprises three units of one container and two
units of two containers.

- 9 -

10. Apparatus substantially as hereinbefore described with reference to the accompanying drawings.

1/1

FIG. 1

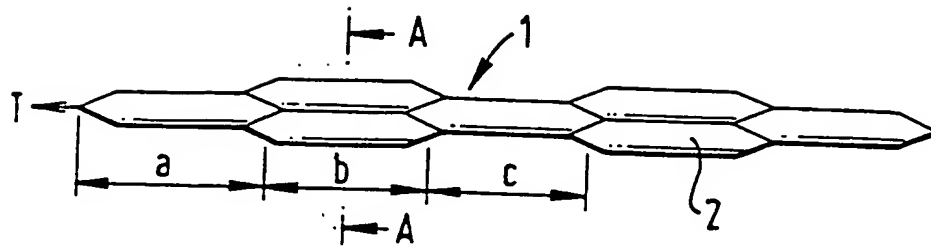


FIG. 2

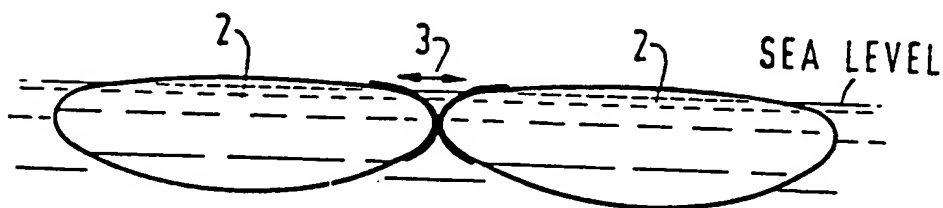


FIG. 3

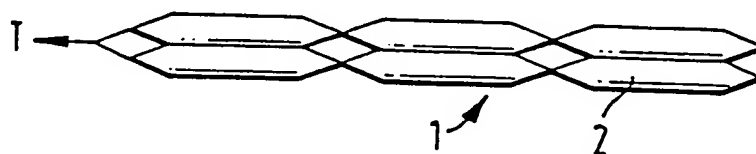


FIG. 4

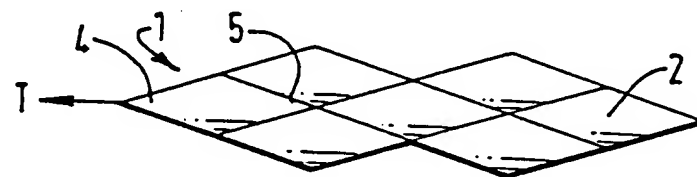


FIG. 5

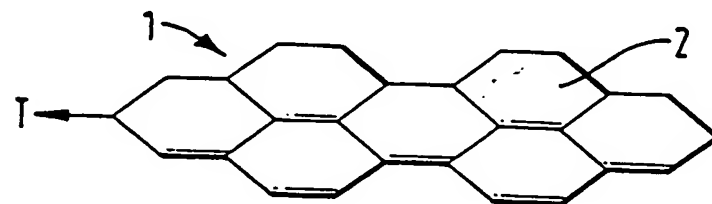
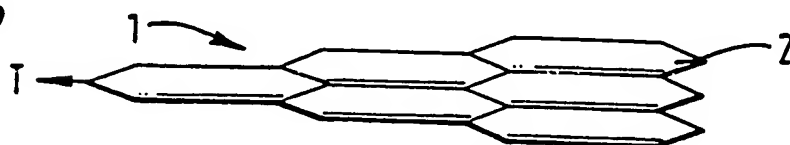


FIG. 6



SUBSTITUTE SHEET (RULE 26)

INTERNATIONAL SEARCH REPORT

In national Application No
PCT/GB 96/01634

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 B63B35/28

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 6 B63B B65D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	FR,A,2 210 180 (GRIHANGNE) 5 July 1974 see page 3, line 24 - page 4, line 2; figures 1,2 ---	1,2,10 3-7
X	FR,A,2 377 931 (LEDUN) 18 August 1978 see the whole document ---	1,2
Y	US,A,3 983 830 (MORGAN) 5 October 1976 see figures 1-6 ---	3,7
Y	US,A,3 289 721 (BENSON) 6 December 1966 see figures 1,2 ---	4,5
Y	GB,A,2 181 996 (YANG) 7 May 1987 see figures 1-2,1-3 ---	6
	-/--	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- *A* document member of the same patent family

Date of the actual completion of the international search

24 October 1996

Date of mailing of the international search report

29.10.96

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+ 31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+ 31-70) 340-3016

Authorized officer

DE SENA, A

INTERNATIONAL SEARCH REPORT

International Application No
PCT/GB 96/01634

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US,A,2 682 751 (BOCK) 6 July 1954 see figures 11,12 -----	1-3,5, 7-9

1

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 96/01634

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
FR-A-2210180	05-07-74	AU-A- 6319873 CA-A- 1002392 DE-A- 2361597 GB-A- 1440800 NL-A- 7317020 US-A- 3952679	05-06-75 28-12-76 20-06-74 23-06-76 14-06-74 27-04-76
FR-A-2377931	18-08-78	NONE	
US-A-3983830	05-10-76	NONE	
US-A-3289721	06-12-66	NONE	
GB-A-2181996	07-05-87	US-A- 4688505	25-08-87
US-A-2682751	06-07-54	NONE	